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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,195	04/27/2001	Heinz Hornung	JEK/HORNUNG	5232

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EXAMINER

GABOR, OTILIA

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,195

Applicant(s)

HORNUNG ET AL.

Examiner

Otilia Gabor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains the phrase "Fig.1". Correction is required. See MPEP § 608.01(b).

Information Disclosure Statement

2. The references cited in the Search Report WO 00/14689 have been considered, but will not be listed on any patent resulting from this application because they were not provided on a separate list in compliance with 37 CFR 1.98(a)(1). In order to have the references printed on such resulting patent, a separate listing, preferably on a PTO-1449 form, must be filed within the set period for reply to this Office action.

Claim Objections

3. Claims 24-46 are objected to because of the following informalities: in claim 24 the phrase "paper of value" is written two different ways (paper of value and paper-of-value); the Applicant should pick one form and carry it through the claims; in claim 35 the term "and" should be present between "emits visible light" and "the light reflected by the paper of value" for proper grammar; claim 36 is grammatically incorrect (within detection?); in claim 39 the phrase "at least one radiation sources" is grammatically incorrect; in claim 39 a comma is needed between the terms "identical" and "in overlap"; claim 39 incorrectly uses the term "characterized by a detector" (there is ambiguity as to

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what that means); in claim 40 the apostrophe is not needed in front of the word "in" in line 6. Appropriate correction is required.

The balance of the rest of the claims is objected to as being dependent from an objected claim.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 24-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 24 recites the limitation "the bright field" in line 6-7. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 24 recites the limitation "the radiation source" in line 8. There is insufficient antecedent basis for this limitation in the claim.

8. Claim 24 recites the limitation "the dark field" in line 9-10. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 24 recites the limitation "the particular detected first and second areas" in line 16-17. There is insufficient antecedent basis for this limitation in the claim.

10. Claims 25, 29, 30-32, 36, 37 contain the limitations that: dark and light fields are "effected" (claim 25), the motion of the paper value is "effected" (claim 29), the evaluation of the detected radiation is "effected" (claim 30), the irradiation of the first and

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second areas are "effected" (claim 31), the radiation of the irradiated areas in the bright and dark fields are "effected" (claim 32), the detection of the radiation is "effected" (claim 36), and the irradiation of the areas of the paper are "effected" (claim 37), however, there is no definition or explanation or description of what exactly does it mean to have these elements be "effected". As such, the claims are indefinite.

11. Claim 33 recites the limitation "the intersection point" in line 3. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 33 recites the limitation "the connecting line" in line 4. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 35 recites the limitation "the light reflected" in line 2. There is insufficient antecedent basis for this limitation in the claim.

14. Claim 38 recites the limitation "the intersection point" in line 3. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 38 recites the limitation "the connecting line" in line 4. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 46 recites the limitation "the second detector" in line 1. There is insufficient antecedent basis for this limitation in the claim.

17. Claim 46 recites the limitation "the first detector" in line 2. There is insufficient antecedent basis for this limitation in the claim.

18. Claim 46 recites the limitation "the intersection point" in line 3. There is insufficient antecedent basis for this limitation in the claim.

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19. Claim 46 recites the limitation "the connecting line" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. Claims 24, 26, 27, 36, 37, 38, 39, 44, 46 are rejected under 35 U.S.C. 103(b) as being clearly anticipated by Wildenrath (DE 2037755).

Wildenrath discloses an apparatus and method for inspecting valuable papers, in particular bank notes. The method comprises the steps:

- irradiating a valuable paper located in a measurement plane in a first and in a second region F where the second region is identical to the first region; the radiation coming from a source 2; the paper is translationally moved in the measuring plane (see Figs.3, 4)
- detecting the radiation transmitted through the currency in the first region using a first detector 14 arranged in the direct radiation zone of the source 2, and thus detecting radiation in the bright field
- detecting the radiation transmitted through the valuable paper in the second region using a second detector 8 arranged outside the direct path of radiation

from the source 2, and thus detecting radiation in the dark field; the detector 8 is positioned in an oblique fashion relative to the connecting line between the source 2 and the detector 14 so as to detect the paper value at the intersection point of the measuring plane with the connecting line (see Figs.3, 4)

- detecting the reflected radiation using a third detector 11
- repeating the first two steps of detecting transmitted radiation through the paper at different first and second regions
- evaluating the transmitted radiation detected in the first and second regions
- comparing the results of the evaluation of the first region with a particular predetermined value in order to determine whether valuable paper material is present in this region; the evaluation and comparison is done by the processing unit 19. See Figs.1-4.

In operation, by comparing the detected transmitted values to known values and the reflected value with a known value the state of the valuable paper, such as tears, false paper thickness, glued areas, etc., in the paper is recognized. The paper is moved over its entire length, which can be up to approximately 3 to 4 mm (see page 10, line 18).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

24. Claims 25, 28, 40-43, 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildenrath.

Regarding claims 28-30 Wildenrath fails to elaborate on the translational motion of the paper, however having the paper move continuously or be affected in any way (for example stopping the movement) after each transmission evaluation is an obvious feature, which is well known in the art.

Regarding claims 31, 33, 40, 41 Wildenrath fails to use two different radiation sources, one aligned so that it illuminates the first region and the second so that it illuminates the second region, however using two sources instead of only one constitutes an obvious matter of design choice since it fulfills the same function as the source in Wildenrath, namely to illuminate the two different regions in the banknote, and since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis paper Co. v. Bemis Co.*, 549 F.2d 833,

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193 USPQ 8 (7th Cir. 1979). Also Wildenrath uses an embodiment where one radiation source and two different detectors are used to irradiate and detect the transmitted radiation through the paper, however modifications, such as, having two different sources and one common detector to irradiate and to detect the transmitted radiation would be obvious to one of ordinary skill in the art since these modifications involve merely a duplication or omission of elements which have been held to involve only routine skill in the art. *St. Regis paper Co. v. Bemis Co.*, 549 F.2d 833, 193 USPQ 8 (7th Cir. 1979), *In re Karlson*, 136 USPQ 184. Obviously, when only one detector is used to detect two different radiations, the two radiations need to be separated or shifted in time.

Regarding claims 25, 32, 45 Wildenrath fails to disclose that the dark field transmission and the bright field transmission detection or irradiation and evaluation is done at separate times, however this constitutes only a matter of obvious design choice, since it is obvious that when one detector is used to detect two different transmitted radiation, a shift in time is necessary for accurate detection.

Regarding claims 33, 41 it is obvious that when two light sources are used to irradiate the banknote and only one detector is used for detecting both the dark field and the bright field transmitted radiation, that one of the sources has to be aligned with the detector but the other one has to be obliquely shifted relative to the detector to once again obtain dark field detection.

Regarding claims 34, 35, 42, 43 Wildenrath fails to use a visible and an IR emitting light source, however having these specific light sources constitutes only an

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obvious matter of design choice since both are well known and used in the art and since both would work equally well in the Wildenrath device.

Conclusion

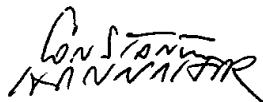
25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Pauli et al. (U. S. Patent 4435834), Jung et al. (U. S. Patent 6246471).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 703-305-0384. The examiner can normally be reached on Monday-Friday between 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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July 8, 2003


CONSTANTINE HANNAHER
PRIMARY EXAMINER
GROUP ART UNIT 2878